

Synopses

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Compliance and efficacy of mouthcare in paediatric cancer patients

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Abstract

Objectives: To assess patient compliance with a protocol for the management of chemotherapy related oral complications and to compare the reported efficacy of chlorhexidine with alternative mouthrinses.

Methods: A cross sectional survey of 41 paediatric patients was performed at the hospital between May and September 2003. All hospitalised children that had received a minimum four weeks duration of chemotherapy and mouthcare prescription during this period were recruited for the study. An interviewer-assisted 16-point questionnaire was used to obtain details from parents regarding mouthcare compliance, efficacy and side effects. All children were examined at initial cancer diagnosis at the hospital dental clinic and dental caries experience was recorded using WHO recognised dmft or DMFT indices. The data were cross-tabulated using the Chi-square procedure on the SPSS biostatistical program (version 11.5).

Results: Fifty nine percent of patients

complied with the prescribed protocol (0.2% chlorhexidine mouthrinse 4xdaily for 60 seconds). Fifty-five percent of patients who developed oral complications such as ulceration, painful mouth and bleeding gums reported that chlorhexidine helped to alleviate these problems. Thirty two percent discontinued use of chlorhexidine due to bad taste and were prescribed an alternative (1% sodium bicarbonate mouthrinse 4xdaily for 60 seconds). Ninety one percent of patients reported that sodium bicarbonate helped to alleviate oral complications. Reported prevalence of mouth ulcers during chemotherapy and $dmft/DMFT \geq 6$ at cancer diagnosis were significantly associated ($p=0.04$).

Conclusions: Compliance with and efficacy of the current oral protocol for management of oral complications during chemotherapy were considered satisfactory. Children with severe caries at initial cancer diagnosis are at high risk for oral complications during their course of chemotherapy.

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President's report

The pit amalgam. Minimal intervention, or an anachronism?

Thinking back to my undergraduate training in the mid-seventies, I remember learning many useful things. For example, it was impossible to bond to dentine, fractured anterior teeth required pins to enhance retention of the composite, and amalgam cavity preparations had to be done according to the principles of GV Black. We were warned about the perils of 'shot gun' or 'pot hole' dentistry, and taught to extend for prevention, so that our amalgam restorations would not fail because of recurrent caries. This of course, proves the adage: 'Half of what we learned in Dental School is wrong by now, the trick is to work out which half!'

The release of the second edition of *Preservation and Restoration of Tooth Structure*, edited by Mount and Hume at the Dental Congress in Adelaide made me reflect on how much has changed in the last twenty five years, and also, to think again about one of my pet hates in dentistry, the pit amalgam. Figure 1 shows the typical situation in a low caries risk patient, and Figures 2a and 2b show the typical situation in a moderate caries risk patient.

Black's principle of extension for prevention was based on the empirical observation that new caries arose in the adjoining pits and fissures around the 'under extended' amalgam restoration in a high caries risk population. The effectiveness of this simple expedient lead to its widespread

adoption and popularity at a time when understanding of the nature and chemistry of the caries process was limited, and the only 'treatment' for caries was to squash amalgam or gold into the hole. How far we have come!

The caries process is now understood to be a dynamic interaction between the acid base chemistry of the bacterial biofilm, the organic and inorganic components of saliva, and the dental tissues. No longer is the caries process seen as an inevitable one way ride to destruction of the tooth, nor is carious tooth structure simply seen as a weak void between a 'good' filling and the 'healthy' tooth structure beneath the decay. By minimising the magnitude, duration and frequency of acid demineralisation, and by modifying the local environment and enhancing the chemistry of remineralisation, it is possible to heal carious tooth structure. No longer is carious tooth structure seen as useless denatured, diseased tissue, a structural weakness that requires complete surgical amputation prior to 'restoration' of the tooth. Rather, the disease of dental caries is seen in a more nuanced light, and we seek to establish a new and more favourable equilibrium for the oral environment in which some or all of the initially diseased dental tissues can be retained and remineralised to make a positive contribution to the structural integrity of the tooth and where necessary, the restoration.

So, is the pit amalgam the quintessence of minimal intervention? After all, we are making a smaller hole in the tooth. Unfortunately, drilling smaller holes is not the same as minimal intervention dentistry. The lesion in Figure 1 is a Black Class I, but a Mount & Hume 1.1

The 'correct' Black treatment is to drill out the decay, extend the cavity outline to include all of the pits and fissures, and then to fill the hole. Such a drastic intervention would be akin to a military 'pre-emptive strike'... Unnecessarily destructive, and with undesirable long-term consequences. The survival of amalgam restorations is known to diminish with the age of first placement, not because amalgam is a bad restorative material, or no longer has a place in paediatric dentistry, but rather because the pit amalgam does nothing to modify the niche environment of the pits and fissures in which the caries initially developed. The long-term outcome of such intervention will eventually be as shown in Figures 2a and 2b (Mount & Hume 1.2).

The minimal intervention approach requires us to understand and modify the environment in which the caries became established. The evidence based solution to this dilemma is the preventive resin restoration, in which a minimal cavity preparation is made to limit the iatrogenic damage to the tooth, and minimise the load on the restorative material (so we don't need the 'strength' of amalgam), while the local environment is modified by extending the fissure sealant into all susceptible pits and fissures.

We have moved from 'extension for prevention' to 'preventing the extension'. Perhaps now we can throw up an umbrella of prevention with a fissure sealant over the restoration.

I look forward to seeing you all at the IAPD meeting in November. I hope you have taken advantage of the Early Bird registration.

John Winters

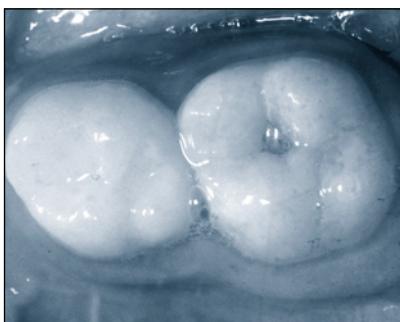


Figure 1

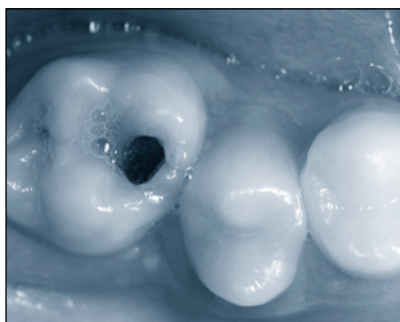


Figure 2a

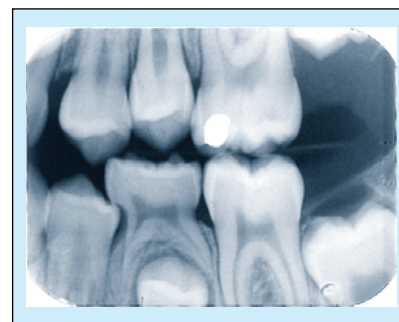


Figure 2b



Australasian Academy of Paediatric Dentistry

The Australian Academy of Paediatric Dentistry continues to grow and develop. There are now 85 members of the Academy, which include 15 trainees.

Over the last 12 months the Academy conducted a program for Postgraduates from all over Australia and New Zealand. This involved lectures on establishing a practice in Paediatric Dentistry, financial aspects of practice, the role of a paediatric dentist within children's hospitals and case presentations. It was a successful program, well attended by our trainees who enjoyed the Queensland sun, karaoke and the benefit of sharing knowledge with colleagues. The Academy would like to thank Kylie Pearce and John Camacho for their organisation.

The Academy has established 'A Standard of Care Document', which is available from the Academy Secretary. This document was developed over a number of meetings by members of the Academy under the direction of Dr Peter Gregory and Dr Sarah Raphael.

The Standard of Care Document provides what is considered 'Best Practice in Children's Dentistry'. The document covers aspects of paediatric dentistry from behaviour management to care of the adolescent and should be read by all those who are involved in the provision of dental care for children and considered a primary reference document.

The second edition of the Handbook of Paediatric Dentistry edited by Angus Cameron and Richard Widmer has been published and is highly regarded worldwide. It has been translated in many different languages. The contributions of many Academy members have made this a text that contains exceptional expertise and knowledge.

The Academy had a pre-congress meeting in Adelaide before the ADA congress where our guest speakers were Dr Helen Rudd, Mr Mark Gussy and Dr Hien Ngo. Helen provided an excellent presentation on pulpal histology, pulpal therapy and pain perception and why hypoplastic teeth can be more painful than others. Hien spoke about glass ionomer restorative materials and their role in paediatric dentistry. He discussed cavity design and the different chemistry between some glass ionomers and the effect that this can have on remineralisation and other properties.

Mark and Helen presented a paper on oral health programs, including the barrier encountered to care, knowledge of treatment and access. Mark's paper on the access to care in rural Victoria was insightful as to the barriers to care in rural Australia. It is important for the children's dentistry community to be aware of these barriers and in the

I would finally like to thank the outgoing members of the executive Dr Peter Wong, Dr Bernadette Drummond and Dr Kerrod Hallett for their hard and industrious work over the past two years and I thank Dr Soni Stephen for staying on the new executive. I hope that my colleagues Dr Nina Vasan (Vice-president) and Dr Mala Desai (secretary) may serve paediatric dentistry as well as past executives.

*Dr James Lucas
President
Australasian Academy of Paediatric
Dentistry*



*Standing: Dr Mala Desai (Secretary) and Dr James Lucas (President)
Seated from left to right: Dr Soni Stephen (Treasurer), Dr Kerrod Hallett
(Past Secretary) and Dr Peter Wong (Past President)*

near future we must define our role as advocates for children's dentistry. It is important that the representative bodies of children's dentistry being AAPD and ANZSPD work together for the betterment of the dental health of children.

Continued from page 1...

Introduction

The oral cavity is a frequent site of complications associated with drug or radiation cancer therapy with mucositis, xerostomia, and local infections being the most common.¹ Oncology patients are predisposed to a variety of infectious diseases due to compromised immunodeficiency.²⁻³ This is more critical especially during the neutropenic episodes when commensal oral infections especially with fungi and viral agents pose additional risks to a child with cancer.

As part of the oncology team, the paediatric dentist at the Children's Oral Health Service (COHS), Royal Children's Hospital (RCH), Brisbane, is responsible for the management of oncology patients particularly with regard to oral health issues. The primary dental role is to identify and manage existing and potential sources of infection in the oral cavity and thus, to minimise potential oral complications during medical therapy.

The standard mouthcare protocol for paediatric oncology patients at the RCH, Brisbane, includes the prophylactic use of liquid mycostatin and 0.2% chlorhexidine mouthrinse / gel four times daily. Chlorhexidine has been routinely prescribed to these patients as the preferred prophylactic agent due to its proven clinical efficacy.⁴⁻⁵ However, there are no published data reporting the effectiveness of the oral protocol from the patient's point of view. Therefore, a survey was conducted on paediatric oncology patients at the RCH, Brisbane, to investigate the efficacy of the current protocol.

Aims

The aims of this survey were to assess patient compliance with a protocol for the management of chemotherapy related oral complications and to compare the reported efficacy of chlorhexidine with alternative mouthrinses.

Materials and Methods

Approval was obtained from the RCH research ethics committee and executive approval from the district manager, RCH and health service district. An interviewer assisted survey was prepared for a cross sectional study of patient responses. A survey

form consisting of 16 questions was used for all cases. There were no exclusion criteria for age, gender or ethnic background. However, a minimum of four weeks duration of the current oral protocol regime was required for case inclusion.

Consent was obtained from the patient or his/her parents/guardian. The patient/parent interview was carried out at the bedside by the paediatric dental registrar in the oncology ward at RCH. The patient's dental chart was subsequently reviewed to obtain the relevant dmft/DMFT data.

Results

The survey was undertaken between 16 May and 19 September 2003.

A total of 41 subjects were interviewed in this survey. All collected clinical data was analysed using the SPSS biostatistical program (version 11.5).

The frequency of each variable was analysed separately and the results were then correlated with other variables.

Ninety-five percent of cases reported that chlorhexidine mouthrinse/gel was recommended as the oral prophylactic agent by the oncology team. The remaining patients were recommended to use either amphotericin B lozenges or sodium bicarbonate mouthrinse (Figure 1).

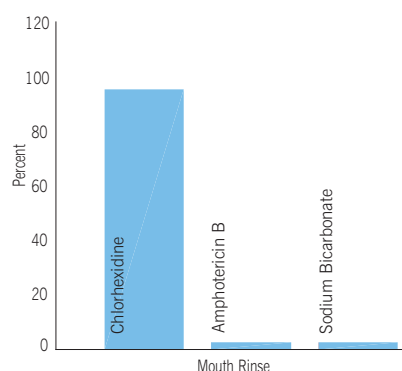


Figure 1. Frequency of prescribed medication

Eighty-three percent of the cases were instructed to use the medication four times a day and 15% reported that they were instructed to use three times a day.

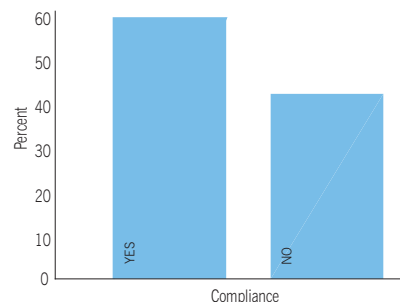


Figure 2. Compliance with prescribed mouthcare

In terms of compliance, 58% of patients followed the recommended instructions (Figure 2). The main reasons for non-compliance were feeling unwell and nauseous.

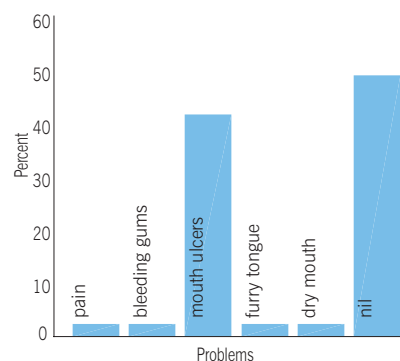


Figure 3. Chemotherapy-associated oral problems

The most common reported oral problems during the course of chemotherapy were mouth ulcers (41%), dry mouth (2%) and furry tongue (2%) (Figure 3).

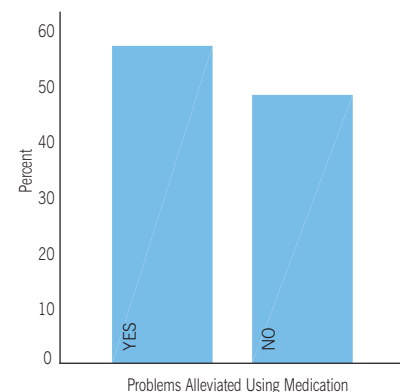


Figure 4. Mouthcare efficacy

Fifty four percent of the cases stated that the prescribed medication helped to alleviate these problems (Figure 4).

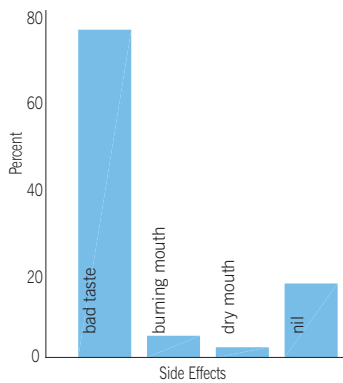


Figure 5. Mouthcare side effects

The most common side effect of the prescribed oral medication was bad taste reported by 76% of the cases. 17% have had no problems/side effects using the medication, while a small percentage complained of burning mouth sensation and dry mouth (Figure 5).

The results from each question were cross-tabulated to assess any significant correlation between different categorical variables.

Fifty-four percent of patients who developed mouth ulcers, painful mouth and bleeding gums during their oncology treatment reported that chlorhexidine rinse/gel helped to alleviate these problems.

Increasing daily frequency of the prescribed mouthrinse to more than two times a day also helped to alleviate these oral problems. 82% of subjects who used the prescribed mouthrinse four times a day complained of bad taste compared to 43% who used it 2-3 times a day.

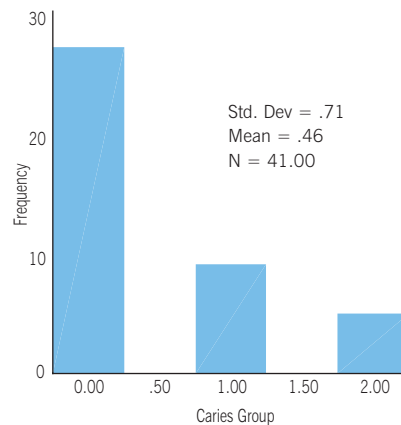


Figure 6. Caries experience

The dmft/DMFT index at case presentation was also analysed to investigate the association between mouthcare efficacy and previous dental caries activity. The dmft/DMFT of the patients who have had dental examination during their medical treatment were divided into three categories – caries free (dmft/DMFT=0), non-severe caries (dmft/DMFT<6) and severe caries (dmft/DMFT≥6). 66% subjects were caries free, 22% had non-severe caries and 12% had severe caries (Figure 6).

Results have shown that 100% of the patients with dmft/DMFT = 6 (severe caries group) developed mouth ulcers. The caries free and non-severe caries group had equal occurrence of 33% developing mouth ulcers (Table 1).

More than 96% of the caries free and non-severe caries group used chlorhexidine. In the severe caries group, 80% of the patients used chlorhexidine mouth care.

A significant percentage of caries-free (89%) and non-severe dental caries (78%) cases practised daily oral

hygiene care using toothbrush and toothpaste. Only 40% of severe caries group brushed their teeth daily using toothbrush and toothpaste during chemotherapy.

The minimum duration of the prescribed medication used in this survey is one month. The reported duration of use among the subjects varied between 1-18 months. For ease of analysis, the duration of use was condensed into two groups –<6 months and >6 months. Results showed that 33% patients who used the prescribed medication for <6 months had mouth ulcers compared to a 75% occurrence in those who used the medication for >6 months.

The longer use of the prescribed medication did not correlate with reported side effects. The discontinuation rate among the two groups did not show any significant statistical difference.

Discussion

The results from the survey have provided useful baseline information in assessing the efficacy of the routine oral protocol regime prescribed for oncology paediatric patients at the Royal Children's Hospital, Brisbane.

Fifty five percent of patients who developed oral complications during the course of chemotherapy have reported that chlorhexidine helped to alleviate these problems. Although the figure is not significantly high, most children seem to benefit from the prescribed use of chlorhexidine. It is also encouraging to know that despite the bad taste of chlorhexidine, only 32% of children discontinued using it.

A strong correlation between the occurrence of mouth ulcers and dmft/DMFT >6 indicated that patients with poor oral hygiene are more predisposed to oral complications during chemotherapy.

The high occurrence (75%) of mouth ulcers in cases who used the prescribed mouthcare of >6 months as compared to 33% who used it <6 months poses interesting discussion. The duration factor did not seem to have any effect on the oral complications during chemotherapy. A similar pattern was also seen when comparing the reported side effects of the prescribed

Table 1: Association between dmft/DMFT and chemotherapy-associated oral problems

	Oral problems		
	Mouth ulcers	Other	Nil
Caries free (dmft/DMFT=0)	33.3%	14.8%	51.9%
Non-severe caries (dmft/DMFT<6)	33.3%	0.0%	66.7%
Severe caries (dmft/DMFT≥6)	100.0%	0.0%	0.0%

Fifty five percent of patients who developed oral complications during the course of chemotherapy have reported that chlorhexidine helped to alleviate these problems.

mouthcare. Although one would expect that cases who have been using the prescribed mouthcare >6 months tend not to discontinue, a higher percentage of patients who have been using it for <6 months still continued using it.

Conclusion

This survey has evaluated the efficacy of the current oral protocol regime for paediatric patients undergoing chemotherapy. Although some of the results were statistically insignificant, we can conclude that the oral protocol prescribed by the Children's Oral Health Services is efficacious in minimising oral complications during their oncology treatment.

However, this study findings are limited due to the short duration of the study and may not reflect long term effects. Furthermore, the number of patients involved in this survey is small due to time constraints. It is hoped that future studies will be carried out to overcome the shortcomings and limitations of the present survey.

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Winning undergraduate essay 2004

“Diagnosis, classification and management strategies of ectodermal dysplasia”

Sally Gardiner

Ectodermal dysplasia (ED) describes a large group of inherited, congenital and non-progressive disorders involving an abnormality in at least two ectoderm derived structures i.e. the hair, nails, skin and sweat glands.^{1,2,3,4,5,6,7} It is a rare disorder with all types of ED affecting approximately seven in every 10,000 births.^{2,8} Due to their close interaction with ectodermal tissue during development, tissues of mesenchymal origin are occasionally affected as well.⁹ Over the last ten years more than 170 different conditions have been recognised and defined as ED.^{3,5,6,7,8} Many are associated with syndromes or anomalies in other organs and systems and in some cases with mental retardation.^{3,5}

Diagnosis

ED manifests early in embryological development some time after the third week (when ectoderm becomes distinguished from mesoderm) and before the twelfth week (when ectodermal cells have become committed to differentiate into specific structures).⁵ The earliest diagnosis is usually made from a fever of unknown origin, severe incapacitation and hyperpyrexia during infancy or later after only mild exertion or even following a meal.¹⁰ Other manifestations include thin sparse blonde hair, defective hair follicles and eyebrows, frontal bossing with prominent supraorbital ridges, sunken cheeks, large ears, nasal bridge depression, protuberant lips, dry skin, fine linear wrinkles and increased pigmentation around the eyes and mouth, hyperkeratosis of hands and soles of feet, anodontia/oligodontia/hypodontia and conical teeth.^{2,9,10,11,12,13} Aplastic or hypoplastic mammary glands can be a feature in females.¹⁰ Rarely mental retardation occurs and some argue this is caused secondarily by recurrent hyperthermia.⁹

Many support a clinical diagnosis made on defects or absence of two or more ectoderm derived structures.^{7,12,14}

Freire-Maia defined the group of EDs as any syndrome that exhibits at least two of the following features trichodysplasia (abnormal hair), abnormal dentition, onchodysplasia (abnormal nails) and dyshidrosis (abnormal or missing sweat glands).¹⁵ These features are subjective, overlap and have a wide variety so confusion and failure to diagnose are not to be unexpected.^{14,16} It may be easy for a clinician to miss something such as very fine dermal ridges over the hands and feet which is used to diagnose the Basan type of ED.¹⁴ However the facial appearance is apparently so characteristic that unrelated affected individuals can be mistaken for siblings.¹⁰ The search for universally acceptable standards for diagnosis has proved elusive.¹⁰

Many cases are first diagnosed by dental health professionals seeing as absent and dysmorphic primary and permanent teeth associated with lack of alveolar ridge development are the most consistent findings in ED.^{2,4,10,12} Xerostomia isn't usually a complaint as it is rare to have total absence of salivary glands, but upon examination reduced salivary flow can be observed.^{10,17} Pharyngeal and laryngeal mucosa may be so atrophic that dysphonia and hoarseness of the voice is present.¹⁰ Heterozygous females are often diagnosed dentally due to a lack of other clinical features.¹ Schalk-van der Weide et al. suggested that an individual with the most stable teeth missing or with several teeth missing should be carefully examined for other signs of ED.² Missing primary teeth should attract scrutiny as congenital absence of primary teeth is relatively rare.⁶ Bergendal reported that patients with hypohidrotic ED often remain undiagnosed throughout their extensive prosthodontic treatment.¹⁷ Signs to be on the look out for include small, conical teeth, wide midline diastemas with high frenal attachment and the most distal of the tooth type missing.^{11,18} According to Guckes et al. the teeth most likely to be present (in order) were the maxillary central incisor, maxillary first molar,

mandibular first molar, maxillary canine, mandibular second premolars and mandibular first premolars.² Vasan reported that maxillary lateral permanent incisors are most likely to be absent.¹⁸

Microscopic hair changes have been noted in Rapp-Hodgkin and Clouston ED.¹⁹ Another form of ED with CNS malformations and hypothyroidism is also associated with hair abnormalities seen microscopically.¹⁹ Fernandes et al. reported perioral papillomatosis associated with EEC – a rare autosomal dominant syndrome.²⁰ These authors hope that these characteristics may provide a diagnostic aid.

The gene responsible for hypohidrotic ED has been identified.² Unfortunately only fewer than 30 EDs have been explained by the identification of a causative gene.⁸ DNA diagnostic studies can make pinpointing the gene responsible a diagnostic aid.⁴ Most EDs are defined by clinical signs, the new approach is to integrate molecular-genetic data with corresponding clinical findings.³

Classification

A definitive and comprehensive classification of ED is difficult to formulate as many of the syndromes that involve ED have overlapping features.¹⁰ The number of conditions considered to be EDs is large and growing in size.¹⁴

Several classifications have been proposed. Freire-Maia and Pinheiro described and classified more than 117 forms of ED into two groups according to the ectodermal derivatives that exhibited the defect.^{3,5,7,12,21} Group A: had at least two defects in either of hair, teeth, nails and sweat glands, group B: had only one of these defects.²² A number was given to each ectodermal derivative (e.g. hair was 1, dentition was 2) and they identified approximately ten subgroups.^{3,5} This was a rather simplified classification, they did not take into account the

variable expression of the disease, that only a few signs may be displayed rather than a full phenotype and also included conditions which are considered by others to have a secondary effect on ectodermal derivatives.^{3,5} Bigata et al. showed that not all clinical features are expressed in every patient, of five patients with ectrodactyly-ectodermal dysplasia (EEC) only three had limb ectrodactyly, the remaining two were diagnosed only after examining the mothers who had ectrodactyly.²¹ Priolo et al. integrated both molecular genetic data and corresponding clinical findings.⁸ Nelson attempted a simple classification to include five categories: hypohidrotic (anhidrotic, Christ-Siemens-Touraine syndrome), hidrotic (Clouston's syndrome), EEC (ectrodactyly-ectodermal dysplasia) syndrome, Rapp-Hodgkin syndrome and Robinson's disease.¹⁰

One of the more common types of ED is the hypohidrotic ED (aka anhidrotic, Christ-Siemens-Touraine syndrome).^{1,6,15,22,23,24} This type manifests primarily as a triad of hypohidrosis, hypotrichosis and hypodontia.²⁵ Referred to originally as congenital ectodermal defect and anhidrotic ED, Felsner later came up with the more appropriate term of hypohidrotic to describe the decreased number of sweat glands rather than total absence.¹⁰ Orofacial characteristics include anodontia or hypodontia, hypoplastic conical teeth, underdevelopment of the alveolar ridges, frontal bossing, depressed nasal bridge, protuberant lips, maxillary hypoplasia, fissuring in corners of mouth, increased pigmentation near eyes, limited ability to sweat, sparse blonde fine hair.^{1,4,6,15} Ears may be set obliquely and prominent, the protuberant lips are due to a lack of alveolar bone and reduced vertical dimension.¹⁸ Hypohidrotic ED was long believed to be an X-linked trait.^{1,23,24} Munoz et al. disproved this theory claiming definitive evidence that it can be inherited by autosomal recessive transmission.²³ Since this report other published work has claimed that hypohidrotic ED follows all types of mendelian modes of inheritance (e.g. autosomal dominant and recessive, X-linked dominant and recessive).^{2,7,8}

Hidrotic ED (a.k.a. Witkop's syndrome, Clouston ED) described by Dr. Clouston in Canada, involves the hair, teeth and nails, whereas it was the first ED in

which the sweat glands appear to be normal.^{2,4,22,26} It is believed to be inherited only by autosomal dominant transmission and dental abnormalities are only occasional compared to the much more common occurrence in hypohidrotic ED.⁴

Ectrodactyly-ED-clefting shows characteristics of hypohidrotic ED with cleft lip or palate and ectrodactyly of hands or feet (a.k.a. split hand/foot malformation, lobster claw deformity).^{4,27} EEC was first noted in 1970 by Rudiger et al. when describing a girl with ectrodactyly, ectodermal dysplasia and bilateral cleft lip and palate.²¹ EEC is an autosomal dominant trait, of which the clinical expression shows great variability.²¹ Charanowska et al. reported a patient whose sole sign of EEC was anodontia

The aim of dental management is to provide adequate function, maintain vertical dimension and restore aesthetic appeal.¹ Achieving these goals allows the patient to have adequate nutrition, speech and therefore acceptance.^{1,6}

of the permanent teeth, yet her two sons manifested all the cardinal signs of EEC.²¹ Roelfsema and Cobben reported that of EEC patients 84% had ectrodactyly, 77% had ED, 68% had clefting, 59% had lacrimal tract abnormalities (tear duct atresia, defective tear film and aplasia of the Meibomian glands) and 23% had urinogenital abnormalities.²¹ Hearing loss, facial and ear anomalies have been occasionally reported with EEC.²¹

Cranioectodermal dysplasia consists of craniofacial and skeletal abnormalities and ED, it is of particular importance

due to an association with life threatening conditions such as kidney failure and abnormal regulation of the parathyroid-bone axis.²² A tooth and nail exclusive type of ED was described by Giansanti et al. and Harrison and Rodney reported an ED which uniquely affected the hair and nails.⁵

Attempts have been made to classify ED according to the number and distribution of sweat pores, structural and biochemical characteristics of hair, dermatological analysis, characteristics of lacrimal secretion and the distribution and pattern of scalp hair.¹⁰ Classification of ectodermal dysplasia based on the function of the protein encoded by the causative gene is thought to be the new direction as Jimenez-Sanchez et al. compiled and classified more than 1000 documented disease genes and found striking correlations between the function of the gene product and features of the disease.⁸ Although many of the causative genes of ectodermal dysplasia have not been identified yet it is thought by some to only be a matter of time.⁸ Priolo et al. proposed a new classification of EDs integrating both molecular and clinical information.⁷ They suggested a genotype-phenotype classification where groups are classified according to clinical features and their corresponding causative genes e.g. group 1 includes 'pure' EDs in which only epidermal derivatives are present and the causative genes are EDA1 and DL.⁷ Kibar et al. reported mapping the locus of hidrotic ED in French-Canadian families which was later confirmed in a large Indian family.²² This new direction in classification of combining the genetic and clinical signs is the first step to understanding the biological mechanisms of ED pathogenesis.³ However, clinical features will have to remain being used until a specific genetic test is developed.²¹

Management

General management includes wigs which can help mask the sparse hair, many affected males do notice a slight increase in amount of hair as they age.⁴ Sponging with cool water, cool drinks and air conditioning are advised for dealing with hot environments.^{4,9,18} Microclimate suits are available to infants or children with severe hypohidrosis.¹⁸ Eye drops, artificial saliva and moist foods can aid diminished secretions.⁹

The aim of dental management is to provide adequate function, maintain vertical dimension and restore aesthetic appeal.¹ Achieving these goals allows the patient to have adequate nutrition, speech and therefore acceptance.^{1,6} Numerous clinical reports have shown the importance of prosthetic dental treatment in ED patients for physiologic and psychosocial reasons.^{10,15} Ideally treatment should begin at 2-3 years of age or as soon as the patient allows impression taking.^{1,6} The cost of remaking and retreating is outweighed by the social and functional benefits.^{10,16,15,18}

Success of treatment depends on patient cooperation and communication.¹⁰ Both patient and parents must have realistic expectations.¹⁵ Dental treatment depends on the severity of the affected structures.²⁸ ED requires complex treatment, a multidisciplinary team combined with the difficulty of treating very young children.^{15,16} Nussbaum and Carrel advocate the use of sedation in problem children requiring extensive prosthodontic treatment.¹⁵ Nowak does not, stating that success requires patient understanding and compliance, recommends the 'tell-show-do' approach and introductory visits to obtain trust.¹⁵ Decision on when to begin treatment should be made by the dentist, patient and parents, Till and Marques recommend that an initial prosthesis can be delivered before the child begins school so they have a normal appearance and time to adjust.¹⁵ A multidisciplinary team of paediatric dentist, prosthodontist, orthodontist and oral and maxillofacial surgeon has been advocated.^{9,15,17,18} Goepfred and Carroll reported successful management of a patient with bonded restorations, orthodontic repositioning, and partial dentures.^{1,2,6} Treatment options include fixed, removable or implant supported prostheses, surgical exposure of impacted teeth, orthodontic adjustment of spaces, laboratory fabricated composite veneers, crowns, bridges and osseointegrated implants.¹⁵ The treating clinicians must have knowledge on growth and development, behavioural management and be able to motivate the patient and parent to accept and use prostheses.¹⁵

Fixed prosthodontics is rarely used exclusively to treat ED due to the large amount of teeth missing.¹⁵ Rigid connectors should be avoided in

actively growing patients as they can interfere with jaw growth especially if they cross the midline.¹⁵ Hogeboom presented a case in which transverse growth of the jaws resulted in separation of a detachable fixed prosthesis.¹⁵ Individual crowns have no age restrictions per se but the conical shape, larger pulp chambers and shorter crowns associated with ED can cause problems.¹⁵ A combination of crowns and direct composite restorations to provide suitable abutments and RPDs is common.¹⁵

Recent trend is towards composite build up of hypoplastic teeth.¹⁵ Acid etch and composite build ups of conical teeth have been shown to provide improved aesthetics and function.^{1,6} Laboratory processed resin composite veneers have been shown to be superior to resins cured in mouth.¹⁰ Tooth crowns are often conical shape, short roots and large pulpal chambers.^{9,28} Without treatment they can suffer from masticatory problems, psychological problems and phonetic disorders.²⁸

*An initial prosthesis
can be delivered
before the child
begins school so
they have a normal
appearance and
time to adjust.*

Removable prosthodontia is the most frequent treatment for ED.¹⁵ Complete, partial or overdentures seem most feasible for anodontia or hypodontia.¹⁵ Under development of the edentulous alveolar ridges can lead to problems with stability and retention.^{6,9,15} Overdentures preserve bone as well as providing increased retention and stability and do not necessitate extended flanges.^{10,15,18} Van Waas et al. verified this claim of bone preservation by comparing overdentures to complete dentures.^{9,15} Vestibuloplasty and ridge augmentation can also help increase retention and stability.¹⁵ Young ED patients are reported to accommodate complete dentures well.^{12,15} Till and

Marques advocate delivering the denture to the arch with the best prognosis first followed by the second 2 to 4 months later for best acceptance by the patient.^{1,15} Primary molars without successors have an unexplained tendency to become ankylosed.^{6,12} Leaving them in place can provide increased stability and retention of subsequent overdentures.¹² If they become further submerged so that oral hygiene is compromised their removal is indicated. Denture appearance must depict the dentition age appropriately.¹⁵ Dentures may serve as interim treatment before the child can receive implant therapy.⁶ Removable prostheses are a cheaper and reversible treatment option which do not jeopardize the existing dentition.¹⁶ Disadvantages include problems with oral hygiene and losing the dentures.⁹

Implant use is on the increase.¹⁵ Numerous authors have reported success with the treatment of ED with implants, some with rates similar to normal patients.¹⁵ Success rates for placing implants in the anterior of mandibles is reported by Guckes et al. as 87% in preadolescents, 90% in adolescents and 97% in adults.² In one study a 90% success rate was observed with osseointegrated implants as a treatment for ED patients aged 13-30.¹⁸ Kearns et al. reported successful implant placement in 40 out of 41 ED patients.²⁹ Implant supported dentures are thought to increase psychological and social well being when compared to non implant supported dentures, this claim is supported by Kent.¹⁵ Another advantage of implant treatment is the preservation of bone.⁹ Bone is already at a minimum due to insufficient tooth development and these ridges are required then to provide a lifetime of support for dentures. Guckes et al. recommend that implant placement be postponed until at least 13 years of age due to movement caused by growth, the cost of frequent remakes and the lack of experience in placing implants in very young children.¹⁵ A 1989 Consensus Conference on Implantology concluded that implant placement should be after maximum growth has occurred, reported in most cases as fifteen.^{15,30} Lekholm quoted 14-15 years for girls and a year later for boys.¹⁵ Animal studies have reported that implants placed in growing jaws become ankylosed.¹⁵ Kearns et al. reported that implants placed in growing jaws

resulted in the vertical dentoalveolar growth submerging the implant if placed adjacent to erupting permanent teeth.²⁹ Oesterle et al. and Cronin et al. both conclude that implants placed in post pubertal or post growth patients have a greater success rate and more predictable prognosis, they also suggested possible sequelae of premature placement as including implant submergence, implant exposure, implant movement and limitation of jaw growth if implants cross the midline.¹⁵ Thilander et al. carried out a longitudinal study of implants placed in patients aged between 13 and 19 years of age. They concluded that implants are acceptable as long as growth and development is complete.¹⁵ Dental and skeletal not chronological age must be considered when placing implants to prevent infraocclusion of prosthesis.^{9,10}

Young patients must be followed closely especially during growth and have post treatment follow up. Common problems include loss of prosthesis retention or occlusal changes caused by erupting teeth or jaw growth.¹⁵ Patient and parents should be aware of the problems which can occur before treatment commences and that a more permanent prosthesis can be constructed after growth has stopped.¹⁵ ED is a genetic disease and therefore the family should receive genetic counselling.⁴ It is important for the dentist to screen siblings and other relatives for signs and symptoms of ED.⁴ Patients may have an increased tendency to drink soft drinks in an attempt to cool off.¹⁸ Preventive care, dietary information and oral hygiene instruction must be provided.

Ectodermal dysplasia describes a large group of inherited, congenital and non-progressive disorders involving an abnormality in at least two ectodermally derived structures i.e. the hair, nails, skin and sweat glands.^{1,2,3,4,5,6,7} Diagnosis and classification are presently based on clinical features. The future trend is towards a genetic-clinical integration. General management includes wigs, temperature control and artificial lubrication. Dental treatment options include fixed, partial or removable dentures, composite crown build ups, osseointegrated implants and fixed prosthodontics.

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ANZSPD Federal Secretary-Manager's report

The Federal council of A.N.Z.S.P.D. met 2 March 2005 in Adelaide. As usual, a lengthy agenda was negotiated.

Richard Widmer and Ed Alcaino presented a comprehensive report on progress of the I.A.P.D. Congress in Sydney in November. At that stage, commercial sponsorship, other than Colgate's generous principal sponsorship, was not flowing in as freely as had been hoped. However, members of the Local Organising Committee [LOC] were going to seize the opportunity in Adelaide at the A.D.A. Congress to pursue potential sponsors. On the other side of the coin, Richard and Ed officially acknowledged the AU\$50,000 contribution from the Federal A.N.Z.S.P.D. New Zealand and Australian themes have been chosen for the Opening Ceremony. The appointed Professional Convention Organisers, I.C.M.S. were proving to be competent. The budgets prepared by I.C.M.S. predicted a break even number of registrations of 350. The LOC had been encouraged by the number of registrations for the A.N.Z.S.P.D. Convention in Melbourne in March 2004 [over 300].

Once again, some confusion has occurred with A.N.Z.S.P.D. members who have become individual I.A.P.D. members. This particularly applies to those who have taken out their I.A.P.D. membership through their provincial A.N.Z.S.P.D. Branch where their provincial branch [N.Z., S.A., N.S.W. and W.A.] has chosen to offer I.A.P.D. individual memberships. The I.A.P.D. Administration, which has now moved to Paris, will send out individual membership renewal notices to **all** I.A.P.D. members, regardless of whether they have joined directly or, in the case of some A.N.Z.S.P.D. members, where they have joined through their A.N.Z.S.P.D. branch. Each year, it seems a few members who have joined through their branch, then join up directly with I.A.P.D. – in other words, they end up joining twice. Despite the confusion, the I.A.P.D. Association Co-ordinator, Sylvie Dutilloy thinks the number of instances of confusion do not warrant a change in the system. It just requires members to be aware that they may already have joined I.A.P.D. through their branch or directly as an individual.

In his President's Report to the Council Meeting, John Winters suggested that A.N.Z.S.P.D. adopt a system whereby all branches update their membership lists twice each year, 31 March and 30 September. With the membership lists accessible to branch secretaries on the A.N.Z.S.P.D. website, this becomes a relatively straight forward exercise. To further formalise this communication between the branches and the federal body, it was decided to adopt 31 March as the date when all federal subscriptions are due.

As mentioned above, the donation to the Sydney I.A.P.D. Congress has been made. This was possible because of the healthy financial position of the Society. This position has been achieved for two reasons – firstly, the half share of Federal Convention profits which go to the Federal body [all recent Conventions have returned substantial profits], and the decision taken at the General Meeting of the Society in Adelaide in February 2000 to increase Federal Subscriptions from AU\$25 to AU\$40 per member. It was a significant increase, and at the meeting, the plan met with some understandable opposition. Now that the financial commitment to the Sydney Congress has been satisfied, it is proposed to reduce the Federal subscription. This will be formalised at the next General Meeting, to be held in Sydney in November.

The R.K. Hall Visiting Lecturer. This tour is held in the year following the Federal Convention of the Society. In this instance, however, the tour is being delayed a year because of the I.A.P.D. Congress in Sydney. It is proposed to hold the tour in February and March of 2006. A programme is being put together which will involve three lecturers, and which will see visits to South Australia, Queensland, the Australian Capital Territory and Tasmania.

Once again, A.N.Z.S.P.D. will conduct a Post-graduate and an Under-graduate Essay Competition in 2005. The topics are as follows:

The Post-graduate topic: "Discuss the evidence which suggests a resurgence in caries prevalence in preschool children, identify possible factors underlying this change, identify risk

groups and possible strategies for management".

The Under-graduate topic: "Discuss the rationale and scientific basis for the continued use of water fluoridation in communities where caries risk has declined due to the 'halo effect' of other fluoride sources".

Members who attended the General Meeting at the Melbourne Convention might recall discussion on the possibility of bottled drinks causing dental erosion; that manufacturers of such drinks do not have to warn of this possible risk, and that maybe such manufacturers should consider incorporating remineralising agents in the products. The Federal Council agreed to appoint a sub-committee to pursue this matter, and approaches to prospective subcommittee members are about to occur.

Each year, A.N.Z.S.P.D. receives a great deal of information from the Australian Dental Association. A regular item concerns a request for nominations from persons interested in serving on the Standing Committees of the Association. These Committees are elected at the November Federal Council meeting of the A.D.A. The relevant Standing Committees are:

- Constitution Committee
- Dental Workforce and Education Committee [former Dental Auxiliaries Committee]
- Infection Control Committee
- Oral Health Committee [former Oral Health Education Committee]
- Therapeutic, Instruments, Materials and Equipment Committee.
- Schedule Committee.

Should any individual or Branch believe they would like to see A.N.Z.S.P.D. representation on any of these committees, please contact me. Email: devlins@iinet.net.au

Alistair Devlin

ANZSPD – Branch news 2005

New Zealand

The NZ Branch has started the year quietly and slowly.

Firstly, our congratulations to Heather Anderson on the birth of her son in Christchurch.

Several members met in Auckland recently for a presentation by Nina Vasan on the Wand followed by a dinner at a local restaurant. Several members are photographed below practicing on each other with the Wand. We all managed to enjoy a great dinner despite having our anterior palates anaesthetized! This was the first of what we hope will become a regular meeting of dentists with a special interest in paediatric dentistry.

We are pleased to confirm that Dr Kathy Harley from the UK has agreed to attend the next NZDA biennial conference in Rotorua next year and are hoping to use her many talents to our advantage. We are also planning a lecture tour aimed at therapists and general dentists in early 2006.

MaryAnne Costelloe



Left to right: Maryanne Costelloe, Wanda Gaynor, Katie Ayers, Nina Vasan, Callum Durward, Geeta Indramohan, Heather Keall

South Australia

The SA Branch started this year with its AGM in February.

President Dean Hewlett presented his report, then declared all offices open for election. We farewelled several people from the committee. Dean, Sue Springbett, Candy Mason, Margaret Evans and John Kibble have all given valuable service to the branch, and we appreciate that they need to take a less active role for a time.

A new committee was elected, with

President Sam Gue, and Vice President Michael Malandris. Jenny Branson is remaining as Treasurer, a role she has carried out for several years very capably. Chris Adams is Secretary. We are very pleased to have new recruits to the committee, Meredith Fantham, and postgraduate students Wendy Cheung and Emma Bell. It is great to see new people keeping our small branch alive and well.

Our guest speaker for the evening was Michael Newbold, alias Dr Phil Betta, a clown doctor. Michael came in costume, as his alter ego, and had a wonderful comic input to the night. He spoke of his work at the Women's and Children's Hospital where he helps sick children and their parents cope with their illnesses. We were impressed with his compassion and his brilliant distraction techniques. Laughter truly is the best medicine. We hope our donation to the Humour Foundation helps to keep this valuable work continuing.

We look forward to another year of branch activities.

Chris Adams

Western Australia

At the Annual General Meeting of the branch, held in December 2004, the following officers were elected:

President

Tim Johnston

Secretary-Treasurer

Alistair Devlin

Federal Councillor

John Winters

Committee Members

Kate Dyson

Jeremy Foster

Mark Foster

Peter Gregory

Theo Gotjamanos

John Hands

Jane McCarthy

Peter Readman

The first meeting for the year for the branch is to be held 10 May. There will be some important business to be dealt

with – a new constitution has been written for the branch, replacing the original constitution written when the branch was established in 1974. The new constitution has been written to comply with the requirements of the W.A. Government Department of Consumer and Employment Protection. This Department is responsible for administration of the Associations Incorporation Act, and the Department has accepted the new document, so allowing the branch to become an incorporated body. At this next meeting, it will be necessary to complete the formality of the members accepting the new constitution. The meeting will also allow the newly appointed Senior Lecturer in Paediatric Dentistry at the University of Western Australia, Dr Boyen Huang to address the members. His topic will be his Ph.D. Thesis: 'The Aetiology of Dental Trauma in Adolescents'.

Branch President, Dr Tim Johnston represented the branch at the Annual Prize-giving Ceremony for the Faculty of Dentistry and Medicine. This event was held at the Lawrence Wilson Art Gallery on the main campus of the University of Western Australia in March. Tim presented two prizes: the first of these was to Simon Frame, who has been awarded the A.N.Z.S.P.D. [WA Branch] Under-graduate Prize. The second prize was the Federal A.N.Z.S.P.D. Under-graduate Essay Competition Prize, and this was presented to Sally Gardiner.

There has been much activity for the Committee of the WA Branch with the preliminary planning for the 15th Federal A.N.Z.S.P.D. Convention. The Convention is to be held at the Cable Beach Club Resort in the Kimberley region of northern Western Australia. The meeting will be from 23-27 May 2007. Most important thing to report at this stage is that the branch is about to appoint Congress West as the Professional Conference Organiser for the event. A theme and Convention title are in the process of being decided upon. It is proposed that the promotion of the Convention should be launched at the I.A.P.D. Congress in Sydney in November 2005.

Alistair Devlin

Victoria

At the February Dinner Meeting new graduate Dr Jason Sebastian was presented the Dr Des Crack Memorial Prize by Mrs Sally Crack. Jason was the best final year undergraduate in 2004 in combined Paediatric Dentistry and Special Needs Dentistry. Mrs Crack briefly spoke concerning her late husband and of family developments to the audience, which included quite a number of members who had known and studied under Des' supervision.

Dr Des Crack was the former Head of the combined Children's Dentistry and Special Care Dentistry Units at the Royal Dental Hospital of Melbourne until his premature death in 1986. Dr Crack was a fine and caring clinician, a dedicated clinical teacher, mentor and friend to many present day dentists and paediatric dentists alike. He is also remembered as being the seminal force in establishing the Royal Dental Hospital of Melbourne Domiciliary Service.

Speakers for the evening were Mark Gussy, senior lecturer in the University of Melbourne Oral Health Therapy training programme, followed by the main speaker for the evening orthodontist Dr Geoff Hall. Mark spoke concerning his research into the oral health status of preschool children in Victoria. He emphasised that there is still a hard core of untreated dental caries within this group, highlighted by the statistic that the greatest cause of hospital admissions for general anaesthesia in the 0-4 age group is for management of acute dental infection. Geoff Hall in his illuminating style, later spoke on the many options for managing missing teeth in a talk entitled 'Oh no, the tooth is missing – what do we do now and how are we going to plan for the future?'

Chris Olsen



Mala Desai and Mrs Sally Crack presenting the Dr Des Crack Memorial Prize to Dr Jason Sebastian

New South Wales

The NSW Branch started the year with a dinner meeting on 22 March 2005 and unfortunately the skies opened up early with pelting rain and high winds. Many of our members did not make it to the dinner but an intimate group was present to hear Professor Eli Schwarz, Dean, Faculty of Dentistry, The University of Sydney chat about 'Paediatric Dental Services, Do we care who treats children?'. Professor Schwarz took up his position with The University of Sydney in October 2004 after professional positions in the USA (Executive Director of AADR/IADR), in Hong Kong (Professor of Public Health Dentistry and Dean, University of Hong Kong), and in Denmark (Chief Dental Officer, National Board of Health, and Associate Professor, University of Copenhagen). Professor Schwarz has a D.D.S., a Ph.D. from University of Copenhagen, Denmark, and an M.P.H. from Hadassah Medical School, University of Jerusalem. He is also a Founding Fellow of the HK Academy of Medicine and HK College of Dental Surgeons. His main research interests are in Oral Health Services Research, Epidemiology, and Preventive Dentistry. Professor Schwarz has vast experience in the organization of children's dental services across the world and shared some of his experience of such services in Denmark (1982-89), Guangdong Province, China (1989-98), and Las Vegas USA (2003-4). There were many questions for Professor Schwarz regarding the undergraduate and postgraduate courses at The University of Sydney including the new Bachelor of Oral Health.

Our meeting on 21 June 2005 was concerned with childhood obesity and its management. There were two speakers. A/Professor Kate Steinbeck, Director of Metabolism and Obesity Services at Royal Prince Alfred Hospital.



Mark Gussy presenting his research survey findings

As part of this service Kate established the Family Weight Management Clinic in 1992. Her clinical interests include childhood and adolescent obesity (including the management of adolescent and adult patients with the Prader Willi syndrome), adolescent endocrinology and the impact of chronic illness on growth and development in adolescents. She has written 'Growing up, not out – a weight management guide for families'. The Family Weight Clinic acts as a state wide resource and she and her team are actively involved in helping other services create weight management clinics for children. A/Professor Steinbeck addressed 'The role of the dentist in the management of obesity'. Susie Burrell, dietitian specialising in the management of childhood obesity, outlined the family approach taken with parents and children.

Our AGM on 20 September 2005 will involve presentations by local paediatric dental specialists and an orthodontist regarding some everyday dilemmas faced by general practitioners, 'Paediatric Pitfalls for Private Practitioners'. A/Professor Richard Widmer will give us his favorite hints regarding behaviour management, Dr Philippa Sawyer will talk about taking radiographs, Dr Juliette Scott will discuss primary extractions and an orthodontist will cover the timing of extraction of first permanent molars (when indicated) to give the best possible outcome.

To top off a very good year, we are all very much looking forward to the International Association of Paediatric Dentistry Congress at the Sydney Convention Centre 31 October – 5 November 2005. This will prove to be 'the icing on the cake' with many overseas and interstate visitors enriching and invigorating us in our professional and personal endeavours.

Philippa Sawyer



Victorian Branch President Mala Desai with Guest Speaker Dr Geoff Hall

Cambodia's first graduates in paediatric dentistry

Callum Durward

Cambodia has made great progress since the dark days of the Khmer Rouge (1975 to 1979) and the following years of civil war, political unrest and poverty. But even today, dental services for children in Cambodia are very limited, and the needs very great. In Phnom Penh the mean dmft of six year old children is over ten! Few children attend the dentist for anything other than extraction, and only when the pain or infection becomes too much to bear. Efforts have been made to address this problem. A recommendation for water fluoridation has been included in successive National Oral Health Plans since 1991, but little progress has been made in this direction. Some school preventive programmes have been implemented, but in the face of so much disease (and almost no treatment) much more oral health promotion is needed. In addition, the knowledge and skills of the Cambodian dentists to treat children is very limited.

The need to improve teaching in all areas of dentistry in Cambodia has been recognised for many years, and only two lecturers at the Faculty of Dentistry have postgraduate qualifications – one has a Diploma of Oral Surgery from NZ, and one a Master of Public Health from Thailand. Scholarships for Cambodian dentists to study overseas are almost impossible to find. The standard of teaching at the dental school is consequently far below that found in neighbouring countries eg Thailand and Vietnam.

Capacity building for the teaching staff at the dental school was identified as a priority by the current Dean, Dr Suon Phany. In 2001 it was proposed to introduce part-time Postgraduate Diploma courses (primarily for Faculty staff), taught by volunteer overseas dentists. The first course was a Diploma in Paediatric Dentistry which began in 2002.

The course was set-up as a part-time two-year diploma, with teaching provided mainly by visiting dentists – many of them specialists in paediatric dentistry and several of them members of the ANZSPD. The curriculum was designed to cover all the relevant areas

of paediatric dentistry (including oral health promotion and prevention), with overseas lecturers visiting intermittently to provide both the theoretical and clinical teaching. Those who contributed to teaching included:

NZ – Dr Callum Durward, Dr Gary Workman, Ms Raewyn West-Hill

Australia – Dr Peter Wong, Dr Karen Kan, Dr Chris Olsen, Associate Professor Hien Ngo, Dr John Fricker, Dr Kathryn Bourke, Dr Bruce Morris, Dr Siva Vasudavan

Sweden – Professor Goran Koch(*)

Hong Kong – Professor Stephen Wei(*), Dr Eilly Lau

USA – Dr Richard Francis, Dr Richard Pedersen, Ms Susanne Zimmer, Dr Edmond Chow

Thailand – Dr Amput Intaraprasong, Dr Tipawan Technitswad

(*lecturers at the FDI-supported Cambodian Dental Association conference)

The course began with five Cambodian dentists, but one was lost when it was discovered that he did not hold a government position (a requirement for entry to the course). Two were lecturers in paediatric dentistry at the dental school, one was the Director of the Dental Nurses School in Kampong Cham, and one worked part-time in a provincial hospital and part-time for a French organisation which provided medical and dental services in Cambodian orphanages.

Each Cambodian dentist was required to carry out a small research project, keep a log book of children treated, conduct seminars, and write up 8 case reports on a range of clinical cases. Written examinations were conducted each year. Three of the dentists presented their research at the South-East Asian IADR meeting in Vietnam. Research topics included: 'Success of ART restorations placed by dental nurse students', 'Oral health of Phnom Penh adolescents', 'Dental anomalies in Cambodian adolescents', and 'Assessment of a Tooth Brushing and Fluoride Mouth-rinsing Programme in Phnom Penh Primary Schools'. In addition, each dentist spent two weeks in Thailand visiting the Faculties of Dentistry and private paediatric practices in Bangkok and Khon Kaen.

By the end of the second year it was clear that one more year was required in order to achieve the Learning Objectives. The course was extended into a third year.

During this third year of the course a major development occurred – the renovation of the Faculty paediatric clinic, and the purchase of five new chairs and other instruments and equipment. This was made possible through a donation by LDS Ministries. Unfortunately other parts of the dental school remain in a dilapidated state, however slow improvements are occurring.

In early 2005 the four Cambodian dentists, Dr Suorn Monika, Dr Nhoun Poum Sen, Dr Vorn Vutha and Dr San Nyep graduated with a Diploma of Paediatric Dentistry. They are the first postgraduate dental graduates in Cambodia.

Since then other Diploma courses have been developed. A Diploma of Dental Public Health has also been completed (with support from the American Dental Association and the Academy of Dentistry International – coordinated by Professor Martin Hobdell). Diploma courses in periodontics (supported by a Japanese group), orthodontics (supported by British group) and oral surgery (supported by German and Australian groups) are all underway. However the Faculty is still lacking courses in restorative dentistry, prosthodontics and endodontics.

The Dean of the Faculty, Dr Suon Phany, has recently requested another Diploma course in paediatric dentistry and in dental public health.

Opportunities for assistance

The Faculty of Dentistry welcomes ANZSPD dentists (and therapists) to help improve paediatric dentistry teaching and the provision of services for children in Cambodia. Ways you can help include:

- Visiting for a week or more to assist in the paediatric dental clinic at the dental school working alongside the Cambodian staff.
- Becoming a visiting lecturer in the

new Diploma of Paediatric Dentistry programme.

- Donations of instruments, equipment, consumables and books, but check what is needed first.

For more information you can contact:

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Dr Monika Suorn, Dentist, Phnom Penh

suornmonika@hotmail.com



The Faculty of Dentistry, Phnom Penh



Dr Callum Durward with four Cambodian dentists who undertook the Diploma of Paediatric Dentistry – Dr Poum Sen, Dr San Nyep, Dr Monika Suorn, Dr Vorn Vutha



Dr Poum Sen, Head of Paediatric Dentistry



The paediatric clinic at the Faculty of Dentistry (before being re-equipped)

Dental project in Cambodia 2005

In November 2004 Phil Ferrie, maintenance technician at Dental Health Services Victoria, and his partner Jodie Winnell travelled to Battambang in Cambodia, to meet with well respected Cambodian Paediatric Dentist, Dr Monika Suorn.

Dr Monika is a demonstrator in the Paediatric department at Phnom Penh University and works tirelessly as a dentist in the Aspeca run orphanages in Cambodia.

The meeting was to plan a voluntary project which consists of constructing a fully functional one chair dental clinic in the number one Aspeca run orphanage in Battambang.

Once the clinic is completed by Phil Ferrie in November 2005, it will have the capacity to treat over one thousand children from Battambang and neighbouring villages.

A fund raising night for the project is planned for late July 2005 which will consist of a dinner and live music. Donations of dental equipment would be greatly appreciated also. Phil Ferrie has previously successfully constructed dental clinics in orphanages in Romania and the Ukraine.

For more information please
contact: Phil Ferrie

phone 03 9399 3157

email philfer30@hotmail.com

Phil Ferrie

People to People Ambassador Programme – China

14-27th September 2004

Dr Joe Verco

I was honoured to be included in the Paediatric Dental Delegation to China led by Dr. Paul Reggiardo, President of the American Academy of Paediatric Dentistry.

The trip was designed to give attendees an insight into paediatric delivery systems, cultural barriers and tertiary teaching differences between that to which we are accustomed in the Western World and that which China now faces with a population of 1.284 billion people served by 24,000 oral health care professionals.

There were 22 professional delegates from far afield, including Alaska, Hong Kong, Australia. The cities visited were Shanghai, Guilin and Beijing.

There were vast differences noted between the major cities compared with rural health care where village doctors are known as “barefoot doctors”. It was of interest that the China Academy of Traditional Chinese Medicine (T.C.M) was founded in 1955.

Shanghai

The Shanghai Research Institute of Stomatology was visited (affiliated with the Shanghai 2nd Medical University).



*Chief Director of the Hospital –
Dr Wang Xin Wei and Dr Joe Verco*

The overall dentist population ratio is 1:50,000 but in major capital cities like Shanghai and Beijing the ratio is 1:7000.

The Dental Clinics were either Private; Collectively owned, joint ventures, Share holding practice or Factory Practice; State owned.

Insurance systems are not open to private practice. Insurance was available from some companies in the cities. In the country the dental care providers are “Barefoot” dentists or roadside “Umbrella Dentists”.



Dr Joe Verco and delegates in Guilin

Qualifications were 5 years for a Bachelors Degree, 7 years Masters Degree (5+2), Ph. D. 8 years (5+3). Only 36 hours of Undergraduate training was spent in Paediatric Dentistry.

There are no more than 400 Paediatric Dentists in China.

Some other statistical figures include the average age at which toothbrushing began was 3.9 years in Shanghai and 3.95 years in Beijing. Bottle feeding continues until about 2 years of age, Caries incidence in Shanghai $d m f t = 6.00$ compared with 4.18 in 1995.

Preventative measures included a "Love Teeth Day" on 20th September each year. Fluoride therapy began in the water supplies in the 1960s but was removed in the 1980s because of a fear of fluorosis. Now only topical fluoride is used. In country areas extracts from tea are painted on teeth as a preventative measure.

Guilin

The Guilin Stomatology Hospital (pronounced Gwaylin) was open seven days per week. National Tooth Day (20th September) had been 'Celebrated' since 1989.

The Paediatric Dental Department had been set up in 2000. There was not any fluoridated water as 75% of the water supply was from individual systems. $d m f t$ was 4.48. There were not any general anaesthetic or sedation facilities offered for the care of paediatric dental patients.

In the broad aspect of the delivery of dental health care it was suggested that if there was a requirement for 'dental fitness' for the Australian Defence Force was there a similar requirement for the Chinese Forces. If the above were so, then would not be possible to allocate personnel for the treatment of civilians in China as the Chinese Forces (many Divisions) would be deployed throughout the country. (This concept received a Chinese thumbs up).

Beijing

Visit included the Beijing University Stomatology Hospital and the Guan An Men T.C.M. Hospital (Traditional Chinese Medicine).



Dr Paul Reggiardo at 'Love Tooth Day' – Guilin



'Love Tooth Day' – Guilin



Guang An Men Traditional Chinese Medicine Hospital – Beijing

Beijing University Stomatology Hospital, founded in 1944, was the largest and most advanced in China. There were 285 students and 800 members of faculty and staff. On average 2,300 patients were seen daily.

The Department of Paediatric Dentistry was established in 1975.

There is no formal training or certification for paediatric dentists in China. Private practice was forbidden until approximately 20 years ago. All materials are provided by the dentist (in India where x-rays, needles and local anaesthetics are purchased separately by the patient). However, in China local anaesthetics cost 'extra'.

The paediatric dentist is remunerated approximately \$US1000 per month.

Only two hospitals in Beijing offer Paediatric Dentistry.

The Guang An Men T.C.M Hospital integrates Eastern & Western Medicine. It was a 600 bed inpatient hospital and also catered for 3,000 outpatients per day.

T.C.M included treatment with:

1. Herbs
2. Acupuncture with or without moxabustion.
3. Tuina (Acupressure and medical massage).
1. Qigong

Herbal medicines were delivered in either separate bags to cook for different lengths of time or in a liquid in a sachet sealed to be cooked or in a tea bag form for travelling.

T.C.M has been developed over 2000 years. T.C.M used tea leaves to help prevent caries and herbal medicines are used for the treatment of bruxism. There is also a 'Tea Toothpaste'.

In the case of anaphylaxis T.C.M was used the 'clear the heat' and 'cool the blood'. Corticosteroids were also used, and after the critical stage herbs were used.

In the case of snakebite the Hospitals did not see many snakebite victims (? Did they die). Antivenene was not mentioned.

Footnote

Dr Joe Verco has been honoured to be invited by the President of the American Academy of Paediatric Dentistry Foundation, Dr Joel Berg, is to participate in an International Professional and Cultural Programme to visit Russia in September 2005.

Dr Joel Berg is professionally based in the Department of Paediatric Dentistry, School of Dentistry, the University of Washington USA.



Guilin Museum. The locals note: the lack of nappies... for hasty exit



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by Dr Jackie Robinson
Colgate Professional
Relations Manager



Colgate Oral Health Month in August

To help raise community awareness of the importance of oral health, Colgate is conducting 'Colgate Oral Health Month' during August, supported by the Australian Dental Association. Colgate Oral Health Month will overlap the ADA's Dental Health Week, which will focus on oral health for children, the first week of August.

To support the ADA campaign on oral health for children, Colgate is encouraging preschool teachers to conduct oral health education sessions the first week of August. A mailout to all preschools in Australia and New Zealand will make teachers aware of Colgate Bright Smiles Bright Futures (BSBF) preschool kits. The kits are available free of charge to preschool teachers while stocks last.

Each BSBF preschool kit contains:

- Dr Rabbit Comes to Pre-School video
- Reversible Alphabet / How to Brush poster
- Comprehensive teachers guide
- Student Take-Home – Dr. Rabbit Wants to Say storybooks (28)
- Parent Take-Home – Help Your Child Have a Bright Smile Today (28)
- Oral Health Message stickers (28)

Encourage preschool teachers in your area to conduct an oral health education session during the ADA's Dental Health Week. Teachers can request kits online:
www.colgateprofessional.com.au



Changing faces in the Colgate Team

We are sad to advise that two respected members of the Colgate Professional Oral Care team have departed since the last edition of Synopses – Jo Stoney of Victoria and Rob Klatowsky of South Australia. Both Jo and Rob will be sorely missed. The good news is that there are some new faces within the Colgate team. A second Territory Manager for Queensland, Felicity Dougherty, has joined us. Felicity will be working closely with Hilary Berry who started in Queensland in February. The ACT now has a dedicated Colgate Territory Manager, Deborah Goodwin. Catherine Byriell has filled the enormous gap left in Victoria and Jodie Cerchez is the new Colgate Territory Manager for South Australia. Contact details for all the Colgate POC Sales staff can be found in the right hand column on this page.

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Coming events

■ 31 October - 5 November 2005

20th IAPD International Congress

Sydney Convention and Exhibition Centre
Sydney, Australia

■ 17-18 March 2006

Mediterranean Congress of Paediatric Dentistry

"Paediatric dentistry at 21st century; reality and prospects"

Palais des Congres, Marrakech, Morocco

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■ 25-29 May 2006

59th AAPD Annual Session

Omni Hyatt and Westin

Cincinnati, Ohio, USA

■ June 2006

5th PDAA Conference

Kaohsiung, Taiwan

■ 23-27 May 2007

15th ANZSPD Convention

Cable Beach Club Resort, WA

■ 24-28 May 2007

60th AAPD Annual Session

Henry B. Gonzalez Convention Center

San Antonio, Texas, USA

■ 14-17 June 2007

21st IAPD International Congress

Hong Kong Convention and Exhibition Centre

Hong Kong

<http://www.iapd2007.com/>

■ 8-13 June 2009

22nd IAPD International Congress

International Congress Centre

Munich, Germany

AUSTRALIAN AND NEW ZEALAND SOCIETY OF PAEDIATRIC DENTISTRY

www.anzspd.org.au

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Submissions

All text for inclusion in Synopses must be submitted to the editor on floppy disk, zip disk, CD, or by email. Both PC and Mac formats are accepted. Media will not be returned. Address email to karenkan@optusnet.com.au. Please enclose your contact details and email address with all submissions.

Deadline next issue

12 August 2005